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between information in the paging signal pertaining to CDPD transmission and information pertaining to analog cellular mode transmission" (column 4 lines 24-27); "a radio frequency transceiver switchably operable in either an analog cellular mode or a Cellular Data Pack[sic] Data (CDPD) mode and processor means for controlling operation in both the analog cellular mode and the CDPD mode" (column 4 lines 29-35).

Jennings discloses a communication system which includes a voice subsystem and a multimedia subsystem. Jennings discloses that in VOIP applications: "voice signals are digitized and packetized at a sending location, transmitted via the internet in a digital format to a receiving location where they are converted into analog voice signals and played to a called party" (column 2 lines 2-5). Jennings mentions that a VOIP phone may be used within the communication system and states that: "For example, should the end point device 110 be a multimedia enabled Voice Over Internet Protocol (VOIP) phone serviced by a computer, the communication link 112 comprises simply an Internet connection."

With respect to independent claims 1, 7 and 13 of the subject application, each of these claims recites a number of specific elements which are present in the claimed digital cellular handset to provide a voice over IP mode, for which the receive or transmit path in support of said mode of operation is explicitly recited. The Examiner has relied on column 2 lines 1-5 and column 6 lines 22-28 of Jennings to assert that the elements of these independent claims not disclosed in Lubin are disclosed or suggested by Jennings.

Claims 1, 7 and 13 of the subject application, each recite a digital cellular processor/microcontroller connected to radio analog-to-digital and digital-to-analog converters, and an Internet Protocol processor/microcontroller connected to said digital cellular processor/microcontroller. Claims 1 and 7 recite that in the receive direction the digital cellular processor/microcontroller processes said raw data signals into a voice over Internet Protocol packetized data stream, and that the Internet Protocol processor/microcontroller unpacketizes and processes said voice over Internet Protocol packetized data stream into a voice data stream. Claims 1 and 13 recite that in the transmit direction the Internet Protocol

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processor/microcontroller packetizes and processes said raw data signals into a voice over Internet Protocol packetized data stream and that the digital cellular processor/microcontroller processes said voice over Internet protocol packetized data stream into a digital cellular compatible data stream.

Applicant submits that neither Lubin nor Jennings discloses or suggests a cellular processor/microcontroller and an Internet Protocol processor/microcontroller in a digital cellular handset coupled and arranged as described in claims 1, 7 and 13 and moreover Applicant submits that they do not teach the specific and cooperative functions performed by the digital cellular processor/microcontroller and the Internet Protocol processor/microcontroller of the digital cellular handset claimed.

Furthermore, Applicant submits that Jennings does not disclose the voice over IP elements of the present application, how they would function within a digital cellular handset, how they would cooperate with the remaining elements recited, and how they would be arranged therewith. The Examiner has alleged that Jennings teaches in VOIP communication voice signals are digitized and packetized at a sending location transmitted via the Internet in a digital format to a receiving location where they are converted into analog voice signals and played to a called party (column 2 lines 1-5). The Examiner also relies on the passage found at column 6 lines 22-28 wherein Jennings discloses that a telephone and computer are coupled to a network through which they couple to the communications system, and that the telephone *supports* Voice Over Internet Protocol (VOIP) communications.

Within the passage of column 2, Jennings does not state the structure or function of any element of an apparatus, their interconnection or their function in achieving the desired result of digitizing and packetizing at the sending location of the voice signals into IP packets and the desired result of converting the packets into analog voice signals and playing them to a called party at a receiving location. Within the relevant passage of column 6, although Jennings teaches a telephone and computer coupled to the network and that the telephone *supports* VOIP communication, no where is it revealed how VOIP communication is achieved, which functions

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are performed by the computer, which are performed by the telephone, or even which functions are required. No specific structure or function has been disclosed other than the vague general notion that the desired result is performed at a sending or receiving location, and that a telephone capable of supporting VOIP and computer coupled to the network are involved to somehow achieve it.

Jennings does not disclose all of the specific elements recited in claims 1, 7, and 13, their function, how they cooperate and are arranged in a digital cellular handset with the remaining elements, and as such Applicant submits that Jennings, in combination with Lubin, does not provide the necessary teaching or suggestion to render the structure, function, cooperation and arrangement of the elements specifically recited in claims 1, 7, and 13 of the present application obvious. In view of the foregoing deficiencies in the rejection of record, Applicant respectfully requests therefore that the Examiner withdraw the rejections to claims 1, 7, and 13 under 35 U.S.C. 103(a).

With respect to claims 2-6, 8-12, and 14-18, each of these claims depends from one of claims 1, 7, and 13, and Applicant submits therefore that for at least the reason that claims 1, 7, and 13 are patentable over Lubin in view of Jennings, so to are claims 2-6, 8-12, and 14-18. Applicant respectfully requests therefore that the Examiner withdraw the rejections to claims 2-7, 8-12 and 14-18 under 35 U.S.C. 103(a).

* With respect to independent claims 19 and 21, both Lubin and Jennings identify that generally, prior art voice communication systems were well adapted for voice but not well suited for data, and data communication systems were well adapted for data but ill-equipped to handle voice. Lubin and Jennings disclose that some prior art has been directed to adapting a voice system or data system to work with respectively data or voice which they have been respectively heretofore incompatible with. For example, Jennings discloses at column 1 line 50 through column 2 line 10 that although data communication systems and voice communication systems are generally dissimilar and incompatible, adaptations have been made which allow voice communication systems to provide data transfer functions and allow for data communication

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systems to provide voice services.

As submitted hereinabove, Lubin discloses many aspects required to transfer data in a cellular system in a data mode and also discloses many of the aspects for transferring voice in an analog voice mode. As outlined above Lubin discloses two distinct pathways for operation of said modes. Also as described above, Jennings discloses the very broad concept of digitizing and packetizing voice signals into IP packets for transmission via the Internet to a receiving location where they are converted back into voice signals. Applicant submits however that neither Lubin nor Jennings disclose or suggest implementing voice over IP which is commonly used to enable transmission of voice in a data communication system, to enable transmission of voice through a data stream of a digital cellular handset. As taught in Lubin, cellular handsets are capable of transmitting and receiving voice signals via the standard analog cellular communication mode. Applicant submits that the Examiner has not shown that it is obvious to take a voice over Internet Protocol which is used to provide phone like voice service in a purely data based communications system and to apply it within a digital cellular data stream which has been established to allow the cellular voice communication system to provide data transfer functions. Applicant submits therefore that the steps provided for voice over IP carried out within digital cellular communications is not obvious in view of Lubin and Jennings. Applicant respectfully requests therefore that the Examiner withdraw the rejections under 35 U.S.C. 103(a) to claims 19 and 21.

With respect to claim 20 which depends from claim 19, for at least the reason that claim 19 is patentable over Lubin in view Jennings, Applicant respectfully submits that claim 20 also is patentable and respectfully requests that the Examiner withdraw the 35 U.S.C. 103(a) rejection thereto.

The Examiner has rejected claims 22-28 under 35 U.S.C. 103(a) as being unpatentable over Andersson (United States Patent No. 6,047,194) in view of Kido (United States Patent No. 6,249,811 B1).

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Kido teaches a method of establishing an on demand TCP/IP session between terminals which are connected to a network by a dial-up PPP. A local terminal X is connected to a remote terminal Y by first having the local terminal X connect through a dial-up PPP connection to a local connection point A. The local terminal X will then issue a request to a primary server B to connect to a remote terminal Y. As part of the process of connecting the two terminals through the network, a secondary server C on a remote connection point close to the remote terminal Y calls a fax modem of the remote terminal Y and delivers a very short fax message containing amongst other things the IP address of the local terminal X. The session establishing/monitoring daemon Y2 finds the IP address of the local terminal X from the information in the delivered fax message and uses it to establish an IP connection.

Andersson discloses both a method and an associated apparatus for the selective transmission of packet data to a mobile terminal operable in a radio communication system. When packet data is to be terminated at the mobile terminal, and SMS (short message service) message is first transmitted to the mobile terminal. A determination is made at the mobile terminal whether to permit transmission of packet data thereto, after which packet data is transmitted to the mobile terminal if permission is granted by the mobile terminal.

The Examiner has admitted that Andersson does not disclose the SMS message is embedded with an IP address of the first Internet device, nor that said IP address in the SMS message is extracted. Applicant further submits that Andersson does not disclose an SMS message containing any information for or being transmitted for the purpose of establishing or initiating digital cellular communications over the Internet. The SMS message of Andersson is a message indicating the originator of packet data received at the receiver circuitry which is displayed upon the display element to the user. A user of the mobile terminal determines, in response to the displayed information whether to permit transmission of the packet data to the mobile terminal. Transmission of undesired, or otherwise unsolicited, packet data is selectively prevented at the mobile terminal by denying permission to transmit the packet data thereto (column 3 line 17 to column 4 line 57).

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The SMS message of Andersson is to be distinguished from that of the present application by the absence of its use in actually initiating digital cellular communications over the Internet. The SMS message of Andersson is merely for information purposes to enable a user to make a choice. As such, Applicant submits that Andersson does not teach an SMS message for use in initiating digital cellular communications over the Internet.

The Examiner has taken the transmission of an SMS message to a user of a mobile terminal in a radio communication system to enable that user to make a choice as disclosed in Andersson, and has combined it with the transmission of a facsimile to a conventional work station or PC of a standard wireline based network, the facsimile containing an IP address to facilitate the connection between the work station and another workstation on the network as disclosed by Kido. Applicant respectfully submits that it would not be obvious to one of ordinary of skill in the art to modify Andersson by adding features of Kido, Andersson and Kido disclosing transmission of a completely different kind of message in a completely different kind of network for a completely different purpose. Moreover Applicant submits that there is no reasonable expectation of success to be found in the prior art. There would be no reason to include an IP address in the SMS message which is to be displayed to the user so that he or she may make the choice to refuse the connection. An IP address generally consisting of numerals separated by periods would generally not provide the kind of information which would be useful to a user. Conversely, applying an SMS messaging system to Kido is neither straightforward nor practical given the nature of the specific network which forms the context of the subject matter of Kido. Applicant submits therefore that the Examiner has not shown a *prima facie* case of obviousness and submits therefore that claims 22 and 27 are patentable over Andersson in view of Kido. Applicant respectfully requests that the Examiner withdraw the 35 U.S.C. 103(a) rejection of claims 22 and 27.

With respect to claims 23-25 and 28, which depend from claim 1, for at least the reasons submitted in respect of claim 1 Applicant submits that claims 23-25 and 28 are patentable over Lubin in view of Jennings.


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Applicant believes that the Examiner's objections have been answered by all of the foregoing and respectfully requests that a timely notice of allowance be issued in this case.

If there are any outstanding issues, the Examiner is respectfully requested to telephone the undersigned.

Respectfully submitted,

By


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